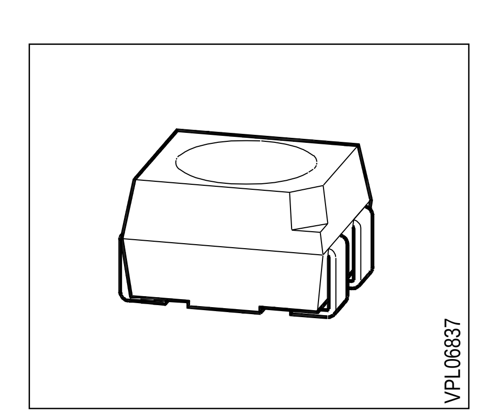
SIEMENS

Hyper Multi TOPLED®
Hyper-Bright LED

LSY T676

Besondere Merkmale

- Gehäusebauform: P-LCC-4
- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- beide Leuchtdiodenchips getrennt ansteuerbar
- hohe Signalwirkung durch Farbwechsel der LED möglich
- bei geeigneter Ansteuerung, Farbwechsel von grün über gelb und orange bis super-rot möglich
- für alle SMT-Bestück- und Löttechniken geeignet
- gegurtet (8-mm-Filmgurt)
- Störimpulsfest nach DIN 40839



Features

- P-LCC-4 package
- color of package: white
- for use as optical indicator
- for backlighting, optical coupling into light pipes and lenses
- both chips can be controlled separately
- high signal efficiency possible by color change of the LED
- with appropriate controlling it is possible to change color from green to yellow and orange to super-red
- suitable for all SMT assembly and soldering methods
- available taped on reel (8 mm tape)
- load dump resistant acc. to DIN 40839

Typ Type	Emissions-farbe Color of Emission	Farbe der Lichtaus-trittsfläche Color of the Light Emitting Area	Lichtstärke Luminous Intensity I_F = 20 mA I_V(mcd)		Bestellnummer Ordering Code
			super-red	**yellow**	
LSY T676 LSY T676-P+P LSY T676-P+Q LSY T676-P+R LSY T676-Q+Q LSY T676-Q+R	super-red / yellow	colorless clear	≥ 40 40 ... 80 40 ... 80 40 ... 80 63 ... 125 63 ... 125	≥ 40 40 ... 80 63 ... 125 100 ... 200 63 ... 125 100 ... 200	Q62703-Q3428

Grenzwerte
Maximum Ratings

Bezeichnung Parameter	Symbol Symbol	Wert Value		Einheit Unit
		LS	LY	
Betriebstemperatur Operating temperature range	T_{op}	– 55 ... + 100		˚C
Lagertemperatur Storage temperature range	T_{stg}	– 55 ... + 100		˚C
Sperrschichttemperatur Junction temperature	T_j	+ 100		˚C
Durchlaßstrom Forward current	I_F	30	20	mA
Stoßstrom Surge current $t \le 10$ µs, $D = 0.005$	I_{FM}	to be defined		A
Sperrspannung Reverse voltage	V_R	3		V
Verlustleistung Power dissipation	P_{tot}	80	55	mW
Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air Montage auf PC-Board*) (Padgröße ≥ 16 mm²) mounted on PC board*) (pad size ≥ 16 mm²)	 $R_{th\,JA}$[1)] $R_{th\,JA}$[2)]	 500 600		 K/W K/W

*) PC-board: FR4
1) nur ein Chip betrieben — 1) one system only
2) beide Chips betrieben — 2) both systems on simultaneously

Notes

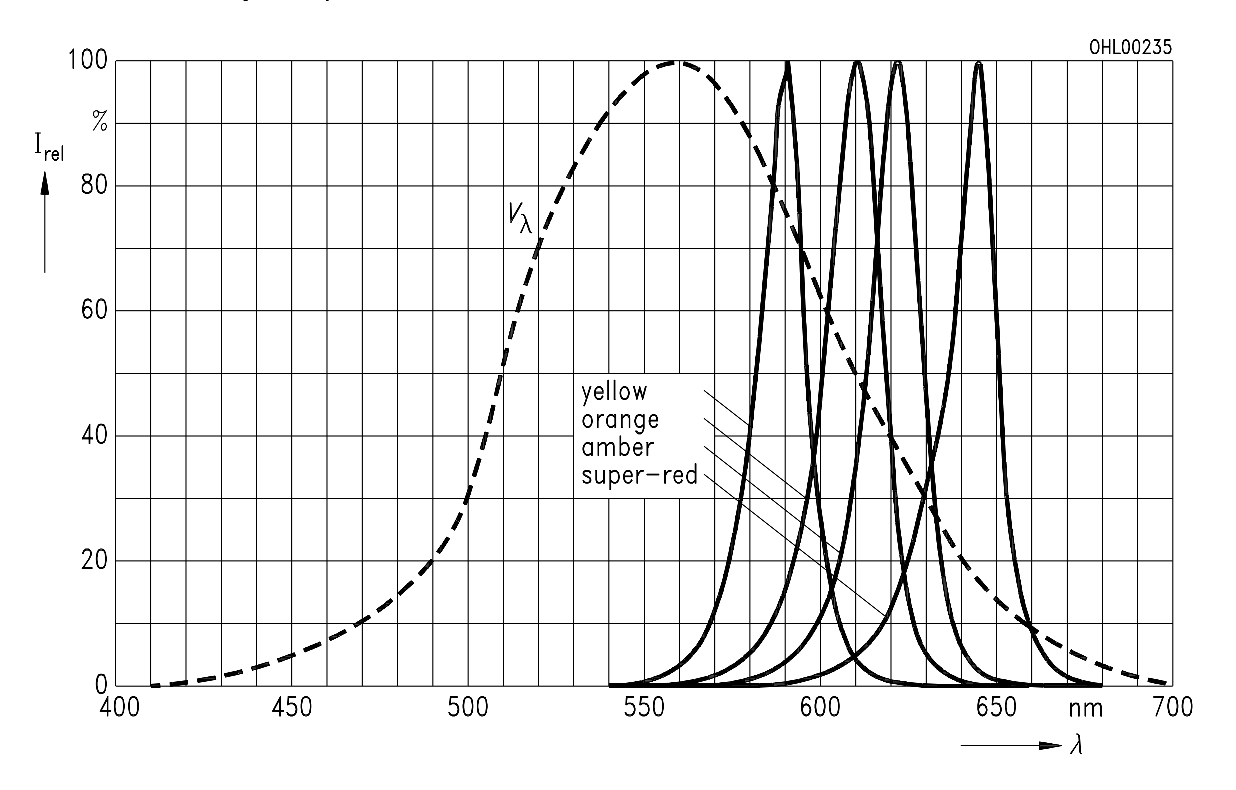
Die angegebenen Grenzdaten gelten für einen Chip.

The stated maximum ratings refer to one chip.

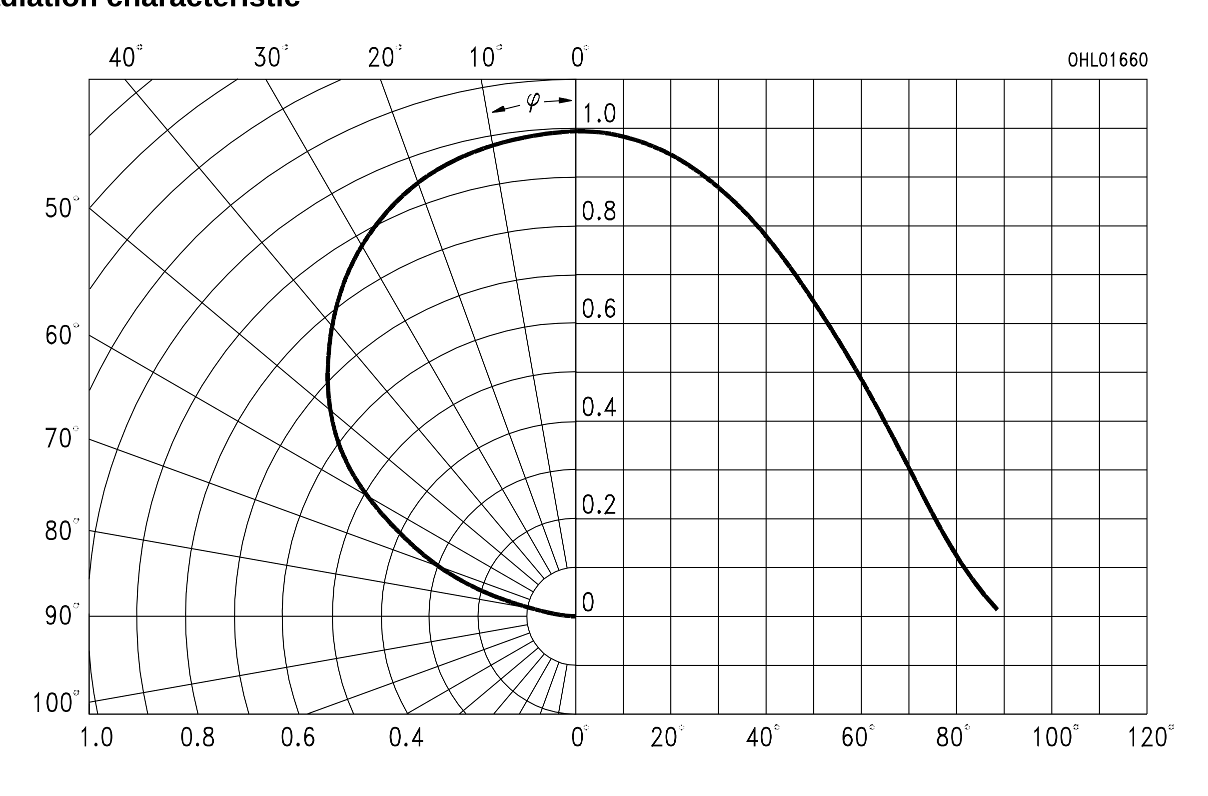
Kennwerte (T_A = 25 ˚C)
Characteristics

Bezeichnung Parameter		Symbol Symbol	Wert Value		Ein- heit Unit
			LS	LY	
Wellenlänge des emittierten Lichtes Wavelength at peak emission I_F = 10 mA	(typ.) (typ.)	λ_{peak}	645	591	nm
Dominantwellenlänge Dominant wavelength I_F = 10 mA	(typ.) (typ.)	λ_{dom}	630	587	nm
Spektrale Bandbreite bei 50 % $I_{rel\ max}$ Spectral bandwidth at 50 % $I_{rel\ max}$ I_F = 10 mA	(typ.) (typ.)	$\Delta\lambda$	16	15	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V		2φ	120	120	Grad deg.
Durchlaßspannung Forward voltage I_F = 20 mA	(typ.) (max.)	V_F V_F	2.0 2.6	2.0 2.6	V V
Sperrstrom Reverse current V_R = 3 V	(typ.) (max.)	I_R I_R	0.01 10	0.01 10	µA µA
Temperaturkoeffizient von λ_{dom} (I_F = 20 mA) Temperature coefficient of λ_{dom} (I_F = 20 mA)		TC_λ	0.014	0.096	nm/K
Temperaturkoeffizient von λ_{peak}, I_F = 20 mA Temperature coefficient of λ_{peak}, I_F = 20 mA	 (typ.) (typ.)	TC_λ	0.14	0.13	nm/K
Temperaturkoeffizient von V_F, I_F = 20 mA Temperature coefficient of V_F, I_F = 20 mA	(typ.) (typ.)	TC_V	– 1.95	– 2.51	mV/K

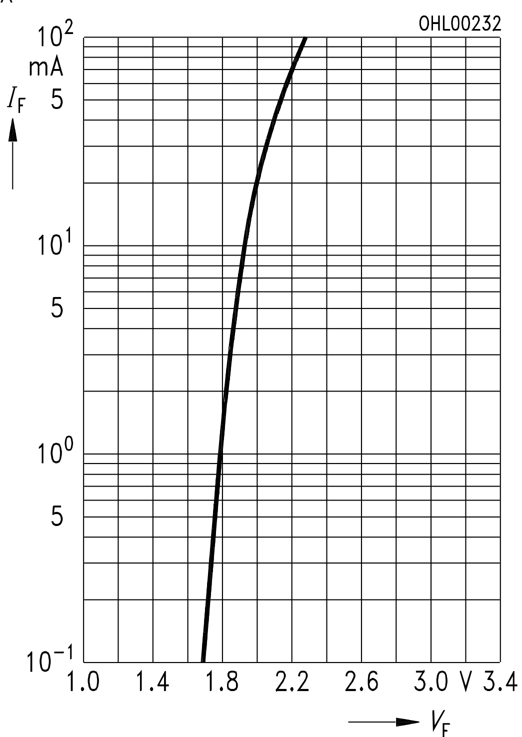
Relative spektrale Emission $I_{rel} = f(\lambda)$, T_A = 25 °C, I_F = 10 mA
Relative spectral emission
V (λ) = spektrale Augenempfindlichkeit
Standard eye response curve



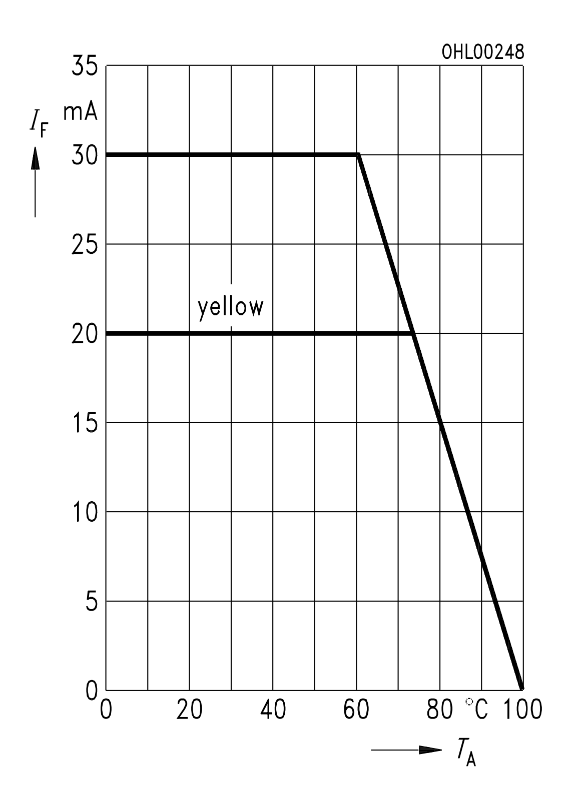
Abstrahlcharakteristik $I_{rel} = f(\varphi)$
Radiation characteristic



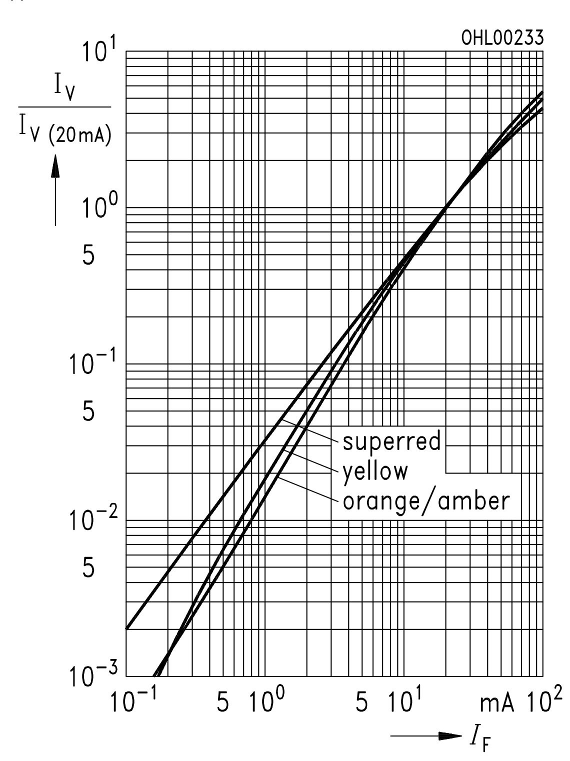
Durchlaßstrom $I_F = f\ (V_F)$
Forward current
T_A = 25 ˚C



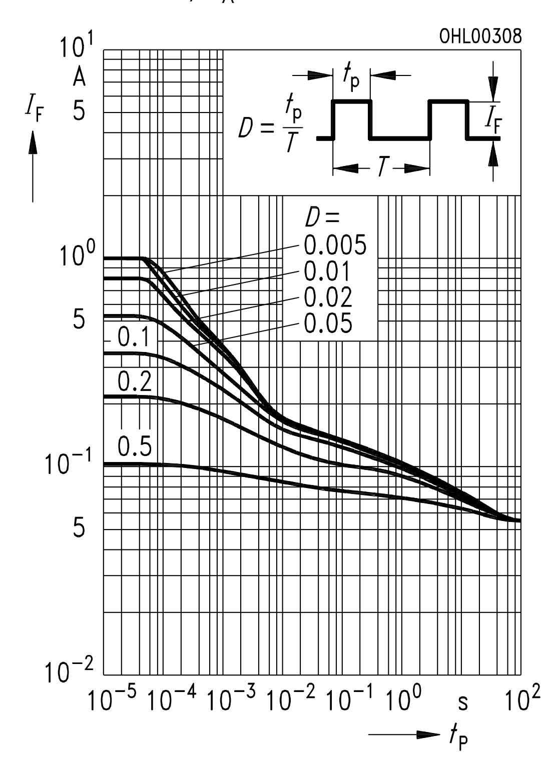
Maximal zulässiger Durchlaßstrom $I_F = f\ (T_A)$
Max. permissible forward current



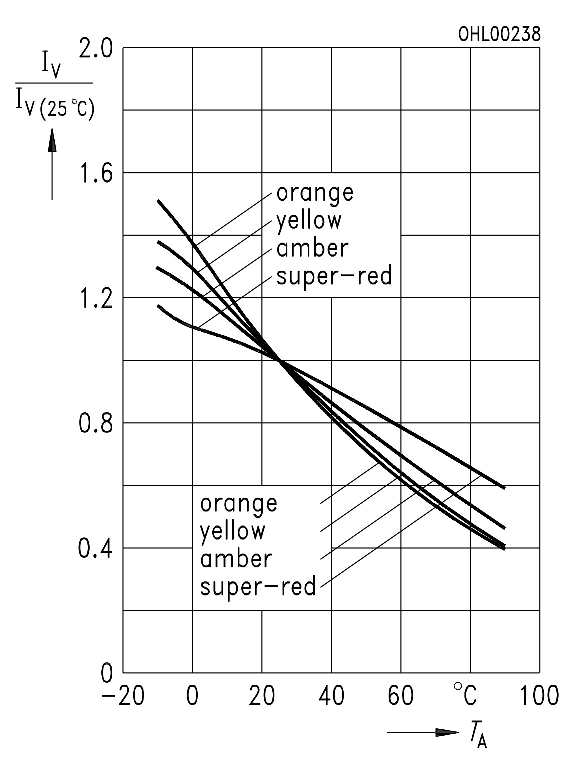
Relative Lichtstärke I_V / $I_{V(20\ mA)} = f\ (I_F)$
Relative luminous intensity
T_A = 25 ˚C



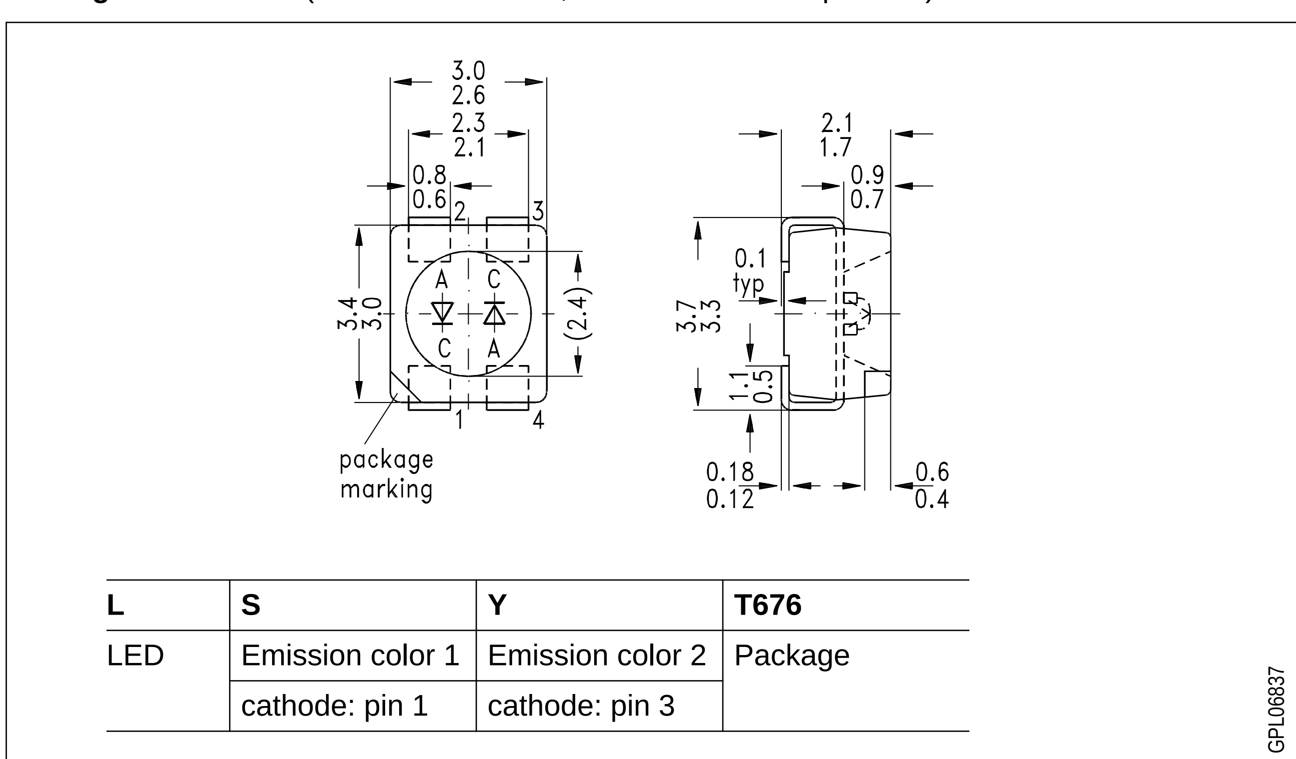
Zulässige Impulsbelastbarkeit $I_f = f(t_p)$
Permissible pulse handling capability
D = Parameter; T_A = 25 °C



Relative Lichtstärke $I_V / I_{V(25\,°C)} = f\,(T_A)$
Relative luminous intensity
I_F = 10 mA



Maßzeichnung (Maße in mm, wenn nicht anders angegeben)
Package Outlines (Dimensions in mm, unless otherwise specified)



L	S	Y	T676
LED	Emission color 1	Emission color 2	Package
	cathode: pin 1	cathode: pin 3	